

CARSON CITY

State Department Says Mercury Emissions Testing Program on Schedule

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The initial phase of mercury emissions testing at Nevada's largest precious metal mines is nearing completion, and the Nevada Division of Environmental Protection (NDEP) reports that the program is on schedule and working as expected.

The testing, mandated by NDEP regulations enacted in May 2006, requires the mines annually to sample emissions from the exhaust stacks of all units with the potential to emit mercury. This initial round of testing is designed to "speciate" or identify the different forms of mercury that are emitted. Mercury emissions take on different forms, and the form affects how the mercury is deposited in the environment. Prior to this initial round of testing, it was unclear what forms of mercury the mines were emitting.

This is an important first step that will guide NDEP in determining the most appropriate pollution control technologies to be applied to each unit. Subsequent testing will quantify the total amount of mercury being emitted from each unit.

"The initial testing results do indeed show that the units are emitting different forms of mercury," said Colleen Cripps, Ph.D., deputy administrator of NDEP in charge of air programs. "We have not seen any unexpected events, considering the high level of sophisticated testing involving a complex industrial process. In short, the regulatory program is working as we expected."

She noted that two companies have been ordered to retest some units, and one mine reported results that raised questions from NDEP officials. NDEP inspectors identified an anomaly at Queenstake Resources' Jerritt Canyon Mine during tests conducted in October 2006. Testing of the mine's two ore roasters produced dramatically different results.

"When we evaluated the data, some of the results jumped out at us as warranting further investigation," said Michael Elges, chief for NDEP's Bureau of Air Pollution Control. "We concluded that some variant in the operational procedures at the mine affected the test results." NDEP has ordered Queenstake to retest the units.

According to Elges, this initial round of testing involved 34 units, 21 of which have been successfully tested. Testing deviations at the 13 remaining units led NDEP to require additional of those units using the exact same test methodology as was used in the other 21. The additional testing is being done on units at Barrick Goldstrike's Goldstrike Mine and at Newmont Mining's Twin Creeks Mine. This will ensure a consistent data set for identifying the different forms of mercury being emitted, according to Elges.

"Everyone needs to remember that this is a brand new regulatory program, the first of its kind

in the nation," he said. "The mining companies and NDEP staff are both going through this process for the first time. As with any new program, we're experiencing some challenges and we're addressing them as we move forward. Overall, though, we're pleased with the way it's going so far."

He explained that the initial testing of the 34 thermal units will produce a complete "speciation" data set sometime this summer. Before the end of the year, all 34 units will be tested again using a different method to quantify total mercury emissions.

The new regulatory program encompasses all precious metal mines in Nevada. It includes new permitting and enforcement provisions and requires enhanced monitoring, testing, recordkeeping and reporting. It also mandates the installation of Maximum Available Control Technology on each unit that emits mercury.

Nevada is home to large areas of naturally occurring mercury, found in geologic formations and soils, and released by volcanic and geothermal activity as well as forest fires. Man-made sources include gold and silver mines, coal-fired electricity generating plants and scrap metal processing operations. Mercury is also present in day-to-day life in such things as dental filings, fluorescent lights, electronic equipment and thermometers.

The main environmental concern is that mercury pollution could be deposited in lakes and streams, where it can accumulate over time in the tissues of fish. The health effects in humans who ingest too much fish containing elevated levels of mercury can include neurological damage, particularly to pregnant women and their fetuses, as well as young children.



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